

A25 individual work board in relative to the manufacturing process. Even if a defect is found after the delivery of finished board, the manufacturing conditions thereof can be traced in detail, since it is possible to find out the accurate time when this defective product was being moved through any one of the manufacturing processes thereof.

**IN THE CLAIMS:**

Please amend the claims as follows:

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b1 1. (Once Amended) A surface inspection system for work boards comprising  
a line sensor for one-dimensionally imaging an elongated work board in lines perpendicular to the moving direction of the work board, comprising two types of image data sampling means, one for an odd-number sampling line and the other for an even-number sampling line;

A26 a velocity-measuring means for measuring in real time the moving velocity of the work board on each data sampling position of the line sensor;

a sampling control means for controlling the image data sampling of said line sensor in the direction of board movement and on the basis of the moving velocity of the work board measured by said velocity means; and

an image-composing memory for forming a two-dimensional image of the work board by sequentially combining odd-line data and even-line data from the line sensor.

507 4. (Once Amended) The surface inspection system for work boards according to claim 1, which further comprises a transmitting means for assigning every work board a transmission channel for sequentially transmitting periodically varying images, assembling said image data into a transmission packet and transmitting said transmission packet.

727 5. (Once Amended) The surface inspection system for work boards according to claim 1, wherein work boards pass through plurality of manufacturing processes, the system further comprising:

a detecting means for detecting the entry and exit of the work board into and out of each manufacturing process;

a time-measuring means for measuring times when the entry and exit of the work board are detected by said detecting means, and

an identifying means for identifying the work board based on a process number representing each manufacturing process, and on times of entry and exit of the work board into and out of the process measured by said time-measuring means.

6. (Once Amended) A surface inspection system for work products that pass through a plurality of manufacturing processes, the system comprising;

a detecting means for detecting the entry and exit of each work product into and out of each manufacturing process;

a time-measuring means for measuring times when the entry and exit of each work product are detected by said detecting means; and

an identifying means for identifying a work product based on a process number representing each manufacturing process, and on times of entry and exit of each work product in to and out of the process measured by said time-measuring means.

Please cancel claim 7.

8. (Once Amended) The surface inspection system for work products according to claim 6, wherein said detecting means detects a leading and a trailing end portion of the work product to be transferred.

Please cancel claim 9.

10. (Once Amended) The surface inspection system for work products according to claim 6, wherein said identifying means identifies the image data of a work product based on a process number representing each manufacturing process, and on the exit time of each work product out of the process measured by said time-measuring means.

Please add the following new claim:

11. (New) A surface inspection system as in claim 3, wherein slant correction is accomplished by an affine transformation based on the angle of slant as determined by the following equation:

$$\theta = \cos^{-1} (A_0/A')$$

wherein  $\theta$  equals the angle of slant,  $A_0$  equals the width of the work board and  $A'$  equals the number of pixels.